

**REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-2, 6-8, 12 and 15-16 are currently pending in this application. Claims 4, 5, 9, 10, 11, 13 and 14 have been cancelled. No new matter has been added by way of the present amendment. For instance, new claim 16 is supported by previously presented claim 15.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

**Issues Under 35 U.S.C. 103(a)**

**Momoda ‘038**

Claims 1, 4-7, 9, 10 and 15 stand rejected under 35 U.S.C. 103(a) as obvious over EP 1,130,038 (hereinafter “Momoda”). Applicants respectfully traverse.

The Examiner asserts that Momoda discloses a curable composition comprising (A) a polymerizable monomer, (B) a polyfunctional monomer, (C) a difunctional polymerizable monomer and (D) a photochromic compound. The Examiner argues that it would have been obvious for one of ordinary skill in the art to optimize the ratio of monomers in Momoda in order to achieve a product with higher tensile strength.

Initially, Applicants note that claims 4, 5, 9 and 10 have been cancelled. Accordingly, the rejection of these claims is moot. Moreover, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re*

*Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v Teleflex Inc.*, 82 USPQ 2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.* (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Momoda discloses a photochromic cured product exhibiting excellent matrix characteristics, such as high hardness and a high heat resistance (see [0013]-[0014]). However, as previously noted, Momoda is completely silent with regard to the tensile strength of the cured product. Moreover, Momoda fails to teach or suggest a composition comprising claimed components (I) to (V), wherein component (I) is present in an amount of 1 to 15 mass% or 3 to 10 mass%, as presently claimed (see, e.g., claims 1 and 7, respectively).

Applicants submit that the present invention provides a cured product having a high tensile strength of 20 kgf or more, and excellent photochromic properties. Applicants have discovered that such a superior product can be obtained when a cured product is obtained by thermopolymerization and comprises claimed components (I), (II) and (III) in the amounts claimed.

As shown in the previously filed Declaration under 37 C.F.R. 1.132, the smallest amount of component (B) disclosed by Momoda (e.g., present component (I)) is 20 mass% (see

Examples). The tensile strength of the obtained cured product is less than 20kgf, which is outside of the presently claimed range.

Moreover, Applicants submit that Momoda fails to teach or suggest a polymerization curable composition for a photochromic lens substrate, comprising claimed components (I) to (V), wherein the polyfunctional polymerizable monomer represented by formula (1) (e.g., component (I)) is at least one selected from the group consisting of caprolactam modified ditrimethylolpropane tetraacrylate, caprolactam modified ditrimethylolpropane tetramethacrylate and caprolactam modified dipentaerythritol hexaacrylate (see, e.g., claim 16).

In view of the above, reconsideration and withdrawal of this rejection are respectfully requested.

#### **Momoda ‘038 in view of secondary references**

Claims 2, 8, 11 and 13 stand rejected under 35 U.S.C. 103(a) as obvious over Momoda in view of Imura et al. (U.S. 5,556,931) (hereinafter Imura ‘931). Additionally, claims 12 and 14 stand rejected as obvious over Momoda in view of Geffcken et al. (U.S. 3,713,869) (hereinafter Geffcken ‘869). Applicants respectfully traverse.

The Examiner acknowledges that Momoda is silent with regard to higher (m+n) values in the bifunctional polymerizable monomer (II). The Examiner further acknowledges that Momoda is silent with regard to the use of a buffer layer interposed between the substrate and the hard coating layer. The Examiner relies on the teachings of Imura ‘931 and Geffcken ‘869 to overcome these deficiencies.

Initially, Applicants note that claims 11 and 13 have been cancelled. Accordingly, the rejection of these claims is moot. Moreover, Applicants respectfully submit that the Examiner

has failed to establish a *prima facie* case of obviousness. As noted above, Momoda fails to teach or suggest a photochromic lens substrate comprising a cured product of a polymerization curable composition, wherein the cured product has a tensile strength of 20kgf or more. The secondary references cited by the Examiner fail to cure this deficiency.

Imura '931 is directed to a polymerizable composition comprising at least two di(meth)acrylate compounds of general formula (I), suitable as a transparent resin. Geffcken '869 discloses a method of applying hard inorganic layers to plastics. However, both Imura '931 and Geffcken '869 fail to teach or suggest any components which could be used to provide a cured product having a tensile strength of 20 kgf or more. The disclosure of soft and hard monomers in Imura '931 does not provide any guidance for a person skilled in the art to arrive at the present invention. Thus, both references fail to teach or suggest a polymerizable curable composition or photochromic lens substrate as presently claimed.

Evidently, the cited references, alone or in combination, fail to teach or suggest every limitation of the instant invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

**Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Vanessa Perez-Ramos, Registration No. 61,158 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

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